

Abstract

The present invention includes novel ligands which may be utilized as part of a catalyst system. A catalyst system of the present invention is a transition metal - ligand complex. In particular, the catalyst system includes a transition metal component and a ligand component comprising a Nitrogen atom and/or functional groups comprising a Nitrogen atom, generally in the form of an imine functional group. In certain embodiments, the ligand component may further comprise a phosphorous atom.

Preferred ligand components are bidentate (bind to the transition metal at two or more sites) and include a nitrogen - transition metal bond. The transition metal - ligand complex is generally cationic and associated with a weakly coordinating anion.

A catalyst system of the present invention may further comprise a Lewis or Bronsted acid. The Lewis or Bronsted acid may be complexed with the ligand component of the transition metal-ligand complex.